

ABSTRACT OF THE DISCLOSURE

In order to provide an automatic analyzer capable of ensuring an effective agitation of the reagent and specimen, hence, highly reliable results of analysis, despite small size of the reaction vessel, without carry-over among different specimens, a multiple piezoelectric elements 35 are arranged in a row along the height of liquid level in the reaction vessel 11, and an ultrasonic reflecting material 38 is installed on the bottom of the portion of the heat insulating bath 12 where heat insulating medium 13 is stored. Lateral ultrasonic wave 9b on the lower side is generated by actuation of the piezoelectric element 35 for lateral irradiation located at the bottom. Lateral ultrasonic wave 9b is reflected by the ultrasonic reflecting material 38, and, as lower ultrasonic wave 8, advances along the wall surface of the reaction vessel to collide with the specimen liquid level, thereby causing a part of the liquid level being closer to the piezoelectric element 35 to be raised. When lateral ultrasonic wave 9a is applied to this portion, lateral ultrasonic wave 9a reaches the inclined portion of the raised liquid level of the specimen. Swirling flow by agitation 36, with specimen liquid level as a starting point, is produced by the acoustic radiation pressure of the ultrasonic wave. The specimen and reagent are mixed and agitated by said swirling flow by agitation 36. This raise of the

- 45 -

part of the liquid level is obtained by controlling a position and an angle of the lower ultrasonic wave 8.